SECTION OF PATHOLOGY.

President—J. M. PURSER, M.D.
Sectional Secretary—E. J. McWEENEY, M.D.

Friday, 25th March, 1898.

The PRESIDENT in the Chair.

Traumatic Rupture of Duodenum.

DR. E. H. BENNETT exhibited an example of rupture of the duodenum from a kick of a horse. In the absence of any definite symptoms an exploratory laparotomy was performed without any lesion being discovered. At the *post-mortem* examination it was found that the portion of the duodenum which lay against the spine and outside the peritoneum had been ruptured, and that the intestinal contents had escaped along the spine downwards as far as the pelvis. He commented on the vagueness of the clinical signs of this injury, and its great fatality.

DR. E. J. McWEENEY said that he remembered seeing in the *post-mortem* room a case of traumatic rupture of duodenum, following a chronic, round, clean punched-out duodenal ulcer. In that case the patient had succumbed to an injury—the kick of a horse in the stomach. Immediate collapse followed the injury. Diagnosis of a rupture of some important abdominal viscus was made, but patient was too far gone to allow of operation. The rupture was into the peritoneal cavity, and was attended by acute, diffuse, purulent peritonitis.

DR. E. H. BENNETT, replying, drew attention to the statement of Colin, to whose facts he (Dr. Bennett) had alluded, that the clinical symptoms of such injury are very vague, and of such injuries recorded, only one recovery followed. A second recovery occurred recently in Buda-Pesth, where the abdomen was opened, after the occurrence of peritonitis, three or four days after injury, the abdominal cavity drained, and the wound sutured.

Cancer of Œsophagus—Perforation of Right Subclavian Artery by a Secondary Growth.

DR. J. W. MOORE read a paper on the above disease. [It will be found in Vol. CV., page 396.]

PROFESSOR O'SULLIVAN read an account of the pathology of the case.

DR. CRAIG said that the case was an extremely interesting one. A somewhat similar case came under his care in the past fort-

night, where the primary cancer occurred in the œsophagus just below bifurcation of trachea, the secondary growths occurring in many places. A large growth occupied the lesser omentum, extending from the posterior wall of the lesser curvature of stomach to the under surface of liver; a lower growth surrounded the aorta, and was adherent to the vertebral column. There were small growths in liver, lungs completely studded with small tumours, and epiglottis also involved; and, although vocal chords and larynx were not involved, there was behind and on edges of epiglottis a new growth—a squamous epithelioma. In his experience of such cases, in nearly all of them the growth involved that part of œsophagus which lies opposite the bifurcation of trachea.

Dr. M'Causland asked if a bougie had been passed more than once? Was any blood or matter noticed on withdrawal of bougie? Was any obstruction noticed? Was the vomited matter ever examined microscopically, and would such examination throw any light on the diagnosis? Was any reason assigned for the fœtid expectoration? His experience was that cancer in the lung gave rise to very fœtid expectoration and marked symptoms.

Dr. E. J. McWeeney agreed with Dr. Craig in saying that the favourite place for cancer of the œsophagus is about bifurcation of trachea. Last week he made a *post-mortem* in a case of cancer of the œsophagus corresponding to bifurcation of the trachea. The left bronchus was adherent to the thickened portion of the œsophagus, and although the œsophagus itself was ulcerated and thickened, there was not the slightest attempt at ulceration of the bronchus, and although there was a big packet of lymphatic glands wedged in between the structures in this situation, careful examination revealed not the slightest evidence of cancerous deposition in any one of them. They were all black, and appeared to be infiltrated with carbonaceous pigment from the lungs. It was thus interesting to note how completely limited cancer may be to the mucous membrane of the œsophagus itself without spreading to such eminently attackable structures by epithelioma as the nearest lymphatic glands.

Dr. Knott had seen Dr. Moore's case, and could confirm his difficulty about the diagnosis. About a hundred years ago, when disease of œsophagus was rare, the upper third of œsophagus was laid down by all authorities to be the most favourite seat for cancer which was scirrhus. Later German statistics showed that the common seat was at the lower end, and was always epithelioma. He asked Dr. Moore what was his experience of secondary growth as limited to œsophagus. He had heard it laid down by some

authorities that fœtid expectoration is never characteristic of cancer of the lung.

Dr. Moore, in reply, said that the bougie had been passed only once before the case came under his observation, and the passage of the bougie produced a remarkable amelioration in the symptom of dysphagia. However, he forbade further attempts to pass it, as he came to the conclusion that a thoracic aneurysm was present. With regard to the expectoration, he concluded that that was another evidence of intrathoracic aneurysm, that the pressure was exercised on the nutrient vessels of left lung in which there were distinct physical signs. In answer to Dr. Knott he said that there was no evidence of involvement of the lung in the cancerous growth at all. He added that the mode of death seemed to him to confirm the diagnosis of aneurysm, which was first called in question by the X-rays examination, which revealed no aneurysmal tumour.

Bones Removed in Case of Fracture of Skull.

Mr. Wheeler exhibited a patient, and bones removed, trephined for depressed fracture of skull.

C. M., aged twenty-nine, occupation a coachman, was admitted into the City of Dublin Hospital on the 21st March, 1897, having sustained a severe injury to his head, caused by a fall from the top of an electric tramcar while in motion. The patient's condition on admission was that of profound coma, he was completely paralysed, and his respirations were stertorous, his pulse was laboured and slow, 50 per minute; the surface of his body was warm and perspiring; both his pupils were dilated, his reflexes were absent; his fæces and urine were retained; there was no hæmorrhage from his ear, mouth, or nose. A large depression could be easily detected upon the left side of his head, in front of the parietal eminence.

A large V-shaped flap was raised, the hair having been previously removed and the soft parts thoroughly cleansed. This exposed the depressed area of bone, which was at the junction of the parietal and sagittal sutures, and there was brought into view an extensive comminuted fracture invading both frontal and parietal bones. A large triangular piece of bone was removed, and two smaller pieces with several spicula. From the superior portion of this large triangular piece of bone the superior longitudinal sinus had to be separated. There was considerable hæmorrhage from a large cerebral vessel as well as from wounds in the dura mater. Ten minutes after the operation the patient conversed with his master, a Doctor of Medicine living in Merrion-square. It is not

necessary to detail the daily progress of this patient, who has quite recovered, except for the loss of sight in his left eye.

After the operation, and for days after, he could see tolerably well with his left eye; his field of vision was impaired, and occasionally there was a "blur," to use his own phraseology, over and round objects he looked at. During this period there could not be ascertained by transmitted light anything abnormal with the fundus or with his optic disc, yet his pupil contracted when his eye was closed and dilated widely when his eye was opened, or when he opened it himself by request. There was no ptosis. There was not any inequality in his pupils previous to the dilatation of his left pupil observed on exposure to light. There was not any sluggish reaction of the right pupil on a strong beam of light being thrown into his left eye. There was not any contraction followed by dilatation, or oscillations of any kind; his pupil remained dilated. The so-called paradoxical pupil is diagnostic of early paralysis, and consists in this—that when a strong beam of light is thrown into the eye with the focal illumination, the pupil at first contracts fairly well, then dilates slightly, contracts again, and after a few such oscillations finally dilates widely, although the strong light still shines into the eye. There is no paralysis in this case.

Traumatic Rupture of Liver and Kidney.

Mr. Wheeler related the history of a child, aged six years, who was run over by a cart, causing rupture of the liver and right kidney, both shown. The child was admitted to the City of Dublin Hospital on March 10th, 1898, at 3 30 p.m., apparently with little the matter, as it ran about the accident ward. There was no external mark. At 4 15, the child, lying in its bed, was observed to get weak, and shortly after exhibited all the signs of collapse; three hours after it died.

The liver presented a contused appearance. On the upper surface and posterior portion of the right lobe, towards the anterior right margin, was a linear rupture, with the capsule torn about $\frac{3}{4}$ of an inch. Between this and right border, near the right lateral ligament, there was an angular gaping rupture, $2\frac{1}{2}$ to 3 inches long, communicating about the centre with the posterior surface and extending round the right margin. Upon the under surface of the right lobe, corresponding to the depression for the kidney, was a long irregular rupture, gaping slightly and extending at one portion into the rupture on the superior surface.

The right kidney presented upon the anterior surface three long

gaping ruptures, two of which passed round its inner border and extended posteriorly, the third extended to theouter border and deeply into the kidney substance. Upon the posterior surface, as well as the two ruptures mentioned, there were about its centre several minute ruptures which were covered by the unbroken capsule. The child passed urine on admission; there was no blood passed with the urine. Although the *post-mortem* examination revealed a large blood-clot in the urinary bladder, there was a large quantity of blood in the peritoneum. The vessels of the kidney were not injured.

Mr. T. Myles said that Mr. Wheeler's second case showed the great obscurity of the symptoms. It was astonishing to note the extraordinary amount of liver shattering that may exist, and be for a time unaccompanied with any severe symptoms. He related the case of a man who got squeezed between buffers on the railway, but had sufficient strength to walk a considerable distance before feeling weak. He was then driven to hospital and put to bed. Soon afterwards he developed some collapse and slight tenderness, and stated that it hurt him to draw a deep breath. Three days afterwards, in a moment of anger—he was sitting up in bed at the time—he snatched up a pillow and threw it, and immediately gave a violent yell, lay back, and was dead in half an hour. *Post mortem* showed the whole abdominal cavity full of blood, three vertical fissures in liver, one extending half way through its substance. Two of them had absolutely united, but the third had apparently been torn open by the sudden muscular effort. He related a remarkable case where a man sustained an abdominal injury, but was able to walk some distance to hospital, assisted by some friends. He vomited blood very freely, and became moderately collapsed. Death occurred in twenty-four hours. *Post mortem* showed the small intestine cut clean across as if cut with a sharp knife, the cut extending for some inches through the mesentery. The right external iliac artery was torn, and a huge extravasation of blood surrounded it. His liver was turned into a regular jelly, and was utterly unrecognisable, and his fifth lumbar vertebra was dislocated half way back behind the fourth. Death was due to shock. It was probable, he said, that in the "wind contusion" death was due to traumatic rupture of liver due to the gliding action of the cannon ball shattering and rupturing the liver, without any external mark of violence.

Dr. E. J. McWeeney said that about a fortnight ago he had made a *post-mortem* examination on a man with rupture of liver caused a fortnight previously. A cart-wheel had passed over

thorax, and the right lung was ruptured, giving rise to a suppurating gangrenous cavity in its substance, and the liver below the diaphragm was ruptured in the most convex part of the right lobe for some inches into the depth of its substance. For several inches along the surface, corresponding to this rupture, the diaphragm had been detached from the liver, leaving a space filled with pus, blood, and bile. On washing away the stuff, the walls were of a brilliant yellow hue, due to bile staining, but the contents were of a brown colour, apparently due to blood and pus, as suppuration had taken place. Death was due to septic absorption. There was nothing whatever in the clinical symptoms to cause a surgeon to suspect rupture of the liver. All the interest was in connection with the lung.

Mr. Wheeler, in reply, said that his own case recalled to his mind the case of a man who received a kick in the abdomen. As soon as collapse was over and reaction established, he tied a branch of the cœliac axis artery in the abdomen. He had seen an example of "wind contusion" mentioned by Mr. Myles, where a man got a six-pounder ball across him. The man walked for a mile and a half. There was not an abrasion on the skin, and his liver, spleen, and kidney were ruptured. Death ensued.

Sarcoma of the Sphenoid.

Mr. Wheeler showed a large sarcomatous tumour—originating in the sphenoid bone—removed from a male patient, aged twenty-five years, whose history was as follows:—

A tall, well-formed man, by occupation a carpenter, was admitted into the City of Dublin Hospital, on October 18th, 1897. He had suffered from inflammation of his right middle ear, consequent upon which he had perforation of his tympanum, and some discharge; he had slight facial paralysis, accompanied with a "scalding" pain in the right side of the face; he had tenderness and pain over his right mastoid region—some rigidity of his masseter muscles; there was no vomiting, no unsteadiness of his gait; there was no eye trouble, nor did examination reveal anything abnormal in his eyes. Mr. Wheeler trephined this patient by his own operation, in December, 1897, opening the mastoid cells, the tympanum, and exposing the dura mater, at the upper arc of the trephine circle, which allowed the temporal lobe to be explored. The patient recovered rapidly and progressed to convalescence, feeling much relieved from the pain. The discharge ceased, and there was less contraction of his masseter muscles, the scalding pains in his right face were very much lessened, but the facial paralysis remained unaltered.

In February, 1898, the scalding feeling and pain again troubled him. His masseter muscles again became rigid and contracted, and he now complained of pain in the temporal region anterior and on a level with the superior margin of his ear. The history of his case told that he had received an injury in this situation by a brick falling upon his head, while he was following his occupation as a carpenter in an unfinished house. The possibility of a cerebellar abscess was thought of, but there was not sufficient evidence to verify such a conclusion. There was nothing that could be found by ophthalmic examination to indicate tumour of the brain; his eyes were normal. He was trephined (by Mr. Wheeler) over the seat of his pain upon March 3rd, 1898. A careful examination was followed by a negative result; the man expressed himself much relieved from his pain, which had been acute; he lived until March 8th, and apparently died of pressure on the region of the medulla.

An examination was made, and a rounded nodular tumour was seen bulging into the middle fossa on the right side, extending into the sphenoidal fissure, and posteriorly to the petrous portion of the temporal bone for about 1½ inch, its superior surface being on a level with the anterior-clinoid process; continuing inwards it occupied the space between the anterior and the posterior clinoid process of the right side, extending beyond the middle line; posteriorly a nodule could be seen lying under the fifth nerve, and internally to this a large nodule encircling the sixth nerve as it passes the dura-mater; the carotid arteries were surrounded by this growth, and the third nerve passed into it. The tumour was of vast extent, pressing into the ethmoid bone in front, and into the pterygoid regions on the right side, behind it involved the basilar process of the occipital bone and the occipito-atlantoid joints. The specimen was interesting, taking into consideration the absence of all eye trouble, notwithstanding that the third, fourth, fifth, and sixth nerves passed through the tumour. Two days before the operation of March 3rd, this patient walked about the ward and sat in a chair for two hours.

Dr. McWeeney, who kindly examined the tumour, reports as follows:—

"This tumour is a large round-celled sarcoma. In places there are trabeculæ of very dense, almost structureless, and more or less hyaline tissue, which give the structure a resemblance to cylindroma. This tough structureless material was probably the dura-mater."

Dr. E. J. McWeeney had made a microscopic examination of the tumour; the tumour consisted of sarcoma tissue, partly round and partly spindle-celled. There was rather a curious appearance,

due to the presence in the tumour of bands of very tough, almost hyaline connective tissue, which cut up the sarcoma in places into alveolar-looking masses which almost suggested a cancer. The tumour was sarcomatous in nature. He thought, on the whole, that the strands were dura-matral, tough and degenerate, and separated from each other by the cells of the tumour.

MR. T. MYLES asked if any of the physicians present could tell him whether it is ever possible to make an accurate diagnosis of cerebral tumour. As to the surgical side the diagnosis is extremely difficult. He had a good while ago seen a case in Steevens' Hospital with obscure nervous symptoms. A great many medical men thought that the case coincided with Professor Charcot's description of disseminated sclerosis. *Post-mortem* examination soon afterwards disclosed a cerebellar tumour without any disseminated sclerosis.

Note on a Specimen of Complete Osseous Union of Transverse Fracture of Patella.

DR. JOHN KNOTT read notes of a case on this subject.

DR. E. H. BENNETT said that the specimen was as complete as any he had seen; it corresponded very closely indeed with the magazine plates in which there is a specimen almost identical with Dr. Knott's.

MR. MYLES, on examining the specimen, questioned whether the line of fracture along the cartilages represented a complete cleft through the entire thickening of the bone, whether it was not only a chip out of part of the bone.

SIR WILLIAM STOKES thought that there was a distinct mark of the fracture in the front of Dr. Knott's specimen.

MR. WHEELER said he had shown a specimen of bony union of the patella a good many years ago, at the Pathological Section in T.C.D. The specimen was obtained two years after the sustained injury, when death occurred from phthisis.

DR. E. H. BENNETT said that he had seen Mr. Wheeler's specimen. His specimen was one of comminuted fracture of the patella, the bone being broken into three pieces, and not a transverse fracture; such specimens were common.

DR. KNOTT having replied,

The Section then adjourned.